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FITCH EVEN TABIN AND FLANNERY
120 SOUTH LA SALLE STREET
SUITE 1600
CHICAGO, IL 60603-3406

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CZEKAJ, DAVID J

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Application Number: 10/036,910
Filing Date: December 21, 2001
Appellant(s): DANIELSEN ET AL.

MAILED

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Technology Center 2600

Steven G. Parmelee
Reg. No. 28,790
For Appellant

EXAMINER'S ANSWER

This is in response to the supplemental appeal brief filed 9/27/06 appealing the Office
action mailed 6/28/05.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial

proceedings which will directly affect or be directly affected by or have a bearing on the

Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection

contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is

correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,078,694	Takahashi	6-2000
6,665,340	Kimoto	12-2003

6,377,309   Ito   4-2002

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

1.   Claims 1 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by

Takahashi et al. (6078694).

Regarding claims 1 and 12, Takahashi discloses an apparatus that relates

to a method for padding an image signal having an arbitrary shape (Takahashi:

column 1, lines 7-10). This apparatus comprises "providing a video object plane

comprised of object pixels and non-object pixels" (Takahashi: figure 6, column

10, lines 55-67, wherein the object and non-object pixels are the significant and

insignificant pixels), "selecting a group of the object pixels and non-object pixels"

(Takahashi: column 10, lines 55-67, wherein selecting is the process of

classifying the object and non-object pixels as significant and insignificant pixels),

and "for a plurality of non-object pixels, determining a new padding pixel value as

a function of at least a neighboring pixel value" (Takahashi: figure 1, wherein

new padding values are determined and applied).

2.   Claims 1-9 and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by

Kimoto (6665340).

Regarding claims 1 and 12, Kimoto discloses an apparatus that relates to

an image processing system (Kimoto: column 1, lines 9-10). This apparatus

comprises "providing a video object plane comprised of object pixels and non-

object pixels" (Kimoto: figure 11, wherein the video object plane is illustrated,

column 4, lines 24-41, wherein the object pixels are pixels within the padding

region and non-object pixels are pixels outside the padding region), "selecting a

group of the object pixels and non-object pixels" (Kimoto: column 4, lines 47-65,

wherein selecting a group is the process of classifying the pixels as inside,

outside, or on the boundary and whether or not the pixels are within the padding

region), and "for a plurality of non-object pixels, determining a new padding pixel

value as a function of at least a neighboring pixel value" (Kimoto: column 4, lines

37-40, column 7, lines 26-31, wherein the new padding value is determined).

Regarding claims 2-3, Kimoto discloses "some of the non-object pixels are

surrounded on at least three sides by object pixels" (Kimoto: figure 11, wherein

the non-object pixels are shown to be surrounded by the object pixels).

Regarding claim 4, Kimoto discloses "determining a new padding value

includes determining a new padding value as a function of at least a horizontally

disposed neighboring pixel value" (Kimoto: figure 7, column 7, lines 26-31,

wherein the horizontal neighboring value is the horizontal adjacent value).

Regarding claim 5, Kimoto discloses "determining a new padding value

includes determining a new padding value as a function of a vertically disposed

neighboring value" (Kimoto: figure 7, column 8, lines 8-16, wherein the vertical

neighboring value is the vertical adjacent value).

Regarding claims 6 and 8, Kimoto discloses "determining a new padding

value includes determining a new padding value that is equal to the neighboring

value when the neighboring value corresponds to an object pixel" (Kimoto:

column 7, lines 26-31, wherein the object pixel is the padding region, the new value that is equal to the neighboring value is the process of substituting the padding value into the non-object pixel).

Regarding claim 7, Kimoto discloses "determining a new padding value includes determining a new padding value that is equal to an average of a new padding value determined for opposing but neighboring pixel values" (Kimoto: column 7, lines 41-47, wherein the opposing pixel values are the values on the right and left ends of the padding region which are averaged to determine a new padding value).

Regarding claim 9, Kimoto discloses "motion compensating the plurality of object pixels prior to determining a new padding value" (Kimoto: figure 1, item 103, column 8, lines 34-40, wherein motion compensation is performed).

3. Claims 10-11, and 13-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kimoto (6665340) in view of Ito et al (6377309), (hereinafter referred to as "Ito").

Regarding claim 10, note the examiners rejection for claims 1 and 12, and in addition, claim 10 differs from claims 1 and 12 in that claim 10 further requires the object and non-object pixels to be loaded into an array of processing elements. Ito teaches that using an array of processing elements allows an object image and its audio data to be synchronously reproduced (Ito: figures 2 and 4, column 4, lines 41-51, wherein the array of processing elements is the array of encoders). Therefore, it would have been obvious to one having

ordinary skill in the art at the time the invention was made to take the apparatus

disclosed by Kimoto and add the array of processing elements taught by Ito in

order to obtain an apparatus that can correctly display video by being able to

synchronously reproduce audio and video data.

Regarding claim 11, Ito discloses "motion compensating the pixel values

as loaded into the array of processing elements" (Ito: figure 4, wherein the

encoders perform motion compensation, the array of processing elements are

the array of encoders).

Regarding claim 13, note the examiners rejection for claim 6.

Regarding claim 14, note the examiners rejection for claim 4.

Regarding claim 15, Kimoto discloses "repeatedly determining whether to

assign a new padding value based in part of padding values of horizontally

neighboring pixels until all non-state pixels have an appropriate horizontally

assigned new padding value" (Kimoto: figure 7, column 7, lines 26-31, wherein

the horizontal neighboring value is the horizontal adjacent value, column 5, lines

60-65, wherein repeatedly determining is the process of repeating the steps until

the completion of the searching of the object and non-object pixels is complete).

Regarding claim 16, note the examiners rejection for claim 15 and in

addition Kimoto discloses "detecting when all non-state pixels have an

appropriate horizontally assigned new padding value" (Kimoto: figure 4, wherein

the processes indicated in figure 4 perform functions until all non-state pixels

have a new padding value as indicated by the "loopbacks" in the figure).

Regarding claim 17, Kimoto discloses "determining whether to assign a

new padding value comprises repeatedly determining whether to assign a new

padding value a predetermined number of repetitions" (Kimoto: column 5, lines

60-65, wherein the predetermined number of repetitions is repeating the steps

until the completion of the searching is complete).

Regarding claim 18, Kimoto discloses "following horizontal assignment of

new padding values, determining whether to assign a new padding value to non-

state pixels as a function of padding values of vertically neighboring pixels"

(Kimoto: figure 4, wherein the horizontal padding is performed followed by the

vertical padding).

(10) Response to Argument

i.   On pages 8-12, appellant argues that Takahashi and Kimoto fail to disclose

substantially simultaneously determining a new padding value.

The examiner notes that substantially simultaneous processing is not the same

as parallel processing. Parallel processing processes data at the same time, or

simultaneously. Substantially simultaneous processing processes data close to, or

almost simultaneously. Takahashi illustrates in figure 1 determining a new padding

value after performing two processing steps which comprise determining whether the

block (step 12) or adjacent block (steps 14 or 20) is outside the boundary. The

examiner notes that no processing time is lost since the output of this determination is a

simple yes/no answer. Takahashi further discloses in column 13, lines 1-4 dividing the

image or frame into 49 blocks. It is well known within the MPEG environment to

process data at a rate of 30 frames/second. Therefore, at a rate of 30 frames/sec, 1470

blocks per second would be processed. Hence, every 0.00068 seconds, or

substantially simultaneously, a block would be determined to be inside/outside the

boundary and given a new padding value accordingly. The examiner notes the Kimoto

illustrates in figure 4 similar padding processing as Takahashi performs. However,

Kimoto illustrates in figure 11 dividing the image into 210 blocks, thus making a

substantially simultaneous processing time of 0.000158 seconds per block.

(11) Evidence Appendix

No evidence entered and relied upon in the appeal.

(12) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the

Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Dave Czekaj

Conferees:

Mehrdad Dastouri, SPE

Chris Kelley, SPE

MEHRDAD DASTOURI
SUPERVISORY PATENT EXAMINER
TC 2600

CHRIS KELLEY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600